



United States
Department of
Agriculture

Forest
Service

Superior
National
Forest

8901 Grand Ave. Place
Duluth, MN 55808-1122
Phone: (218) 626-4300
Fax: (218) 626-4398

File Code: 2580-2

Date: November 6, 2007

Cynthia Hodges
EQA
Air Quality Division
Michigan Department of Environmental Quality
PO Box 30260
Lansing, MI 48909

Dear Ms. Hodges:

This letter acknowledges that the U.S. Department of Agriculture - Forest Service has received and conducted a substantive review of your proposed Regional Haze Rule implementation plan. Please note, however, that only the U.S. Environmental Protection Agency (EPA) can make a final determination about the document's completeness; therefore, only the EPA has the ability to approve the document. The Forest Service's participation in the State of Michigan's administrative process does not waive any legal defenses or sovereignty rights it may have under the laws of the United States, including the Clean Air Act and its implementing regulations.

We received the Michigan State Implementation Plan (SIP) for Regional Haze, dated October 12, 2007, electronically on October 16, 2007. As Federal Land Manager (FLM) for the Boundary Waters Canoe Area Wilderness (BWCAW), we have an affirmative responsibility to protect the air quality related values (AQRVs) of this Class I area. One of the AQRVs for the BWCAW is visibility, for which the regional haze regulations were promulgated by EPA to address the national visibility goal in Section 169A of the Clean Air Act of "the prevention of any future and the remedying of any existing impairment of visibility in Class I areas."

Our interest in Michigan's regional haze plan is primarily due to the fact that emission sources in Michigan are identified as having visibility impacts in the BWCAW.

In regards to the Regional Haze SIP:

1. FLM consultation: We have heard that the public meeting for this SIP is scheduled for December 4, 2007. Based on the difference between that date and the date we received in the draft SIP, we were not given 60 days notice as required at 40 CFR 51.308(i)(2)
2. Assessment of baseline, natural, and current conditions: The values for natural background on the 20% best days are incorrect. They should be 3.72 and 3.74 for Isle Royale and Seney, respectively. Also, the values for natural background on the 20 percent worst days are slightly different than those on the VIEWS website: 12.37 versus 12.50 for Isle Royale and 12.65 versus 12.80 for Seney.
3. Monitoring: Additional thought should be put into alternative resources for supporting monitoring should federal funds be cut. For example, other government and/or non-



government partners, tribes, and non-profits should be considered as possible funding sources.

4. Absence of the best available retrofit control technology (BART) analyses: The SIP is incomplete because it does not include the BART analyses. The reasonable progress goals (RPGs) the state must set for the Class I areas in its borders must include the effect of BART. Since BART is missing, the RPGs can't be set. Both the RPGs and BART are key parts of the SIP.
5. Subject to BART determination – emission over distance analysis (Q/d): We would like to see more transparency in this determination. We would like to see the Q/d results for all the 84 BART-eligible emission units. Table A1-2 appears to only have some of the BART-eligible units included. It appears that the “emissions” in the Q/d analysis only included sulfur dioxide (SO₂) and nitrogen oxides (NO_x). Also the last column in the table appears to be mislabeled, i.e. it should not be “dV.” We feel the “Q” should also include particulates (e.g. PM₁₀) which are also contributors to visibility impairment. In addition please include the “distance” used in each calculation.
6. Subject to BART determination – Calpuff: Please forward us the protocol used that discusses how the Calmet/Calpuff/Calpost runs were set up and how the visibility results were calculated.
7. Subject to BART determination – electrical generating units (EGUs): While the BART rules allow Michigan to substitute the Clean Air Interstate Rule (CAIR) for BART for SO₂ and NO_x, Michigan still needs to address BART for particulate emissions from EGUs.
8. Reasonable progress – EC/R “*factor analysis*”: In the “Scope” section of this document it says that this report is to be used as “an initial analysis of the five factors.” As such, it is done mainly on an industry-wide basis. The information in the report can be used to identify the likelihood of identifying cost-effective controls at individual facilities within the industrial category analyzed. The cost ranges included in the EC/R report do indeed show that there are emission units in each source category that have cost ranges that would be cost-effective (as determined for other EPA regulations; several hundred to a couple thousand dollars per ton). It is not quite clear, in spite of this information, why Michigan determines that there are no cost effective control measures available.
9. Reasonable progress – source identification: Michigan does not use the Midwest Regional Planning Organization (MRPO) Q/d and PSAT analyses to focus its effort on identifying those specific facilities, outside of the BART sources, for which cost effective controls exist. Michigan does address the individual Michigan facilities analyzed within the EC/R report.
10. Reasonable progress – EGUs: According to Table 1 of Appendix G, Michigan EGUs are projected to have the third highest SO₂ emission rate of the 9 neighboring states. We find no explanation for this in the SIP. All of these states are subject to SO₂ cap and trade programs. Why can't Michigan achieve these lower SO₂ emission rates? The cost-effectiveness analyses in the EC/R report for the EGU1 strategy, and the individual facility analyses, were

in the \$1000-3000 per ton range. According to the EC/R report, the CAIR had costs in the range of \$720-2600 per ton. We would like to point out that the cost threshold used for CAIR was described by EPA as “highly” cost-effective, meaning that while not “highly” cost effective, control strategies at a higher cost-effectiveness may still be cost-effective.

11. Reasonable progress goals – clean days: Reasonable progress goals for the 20 percent clean days were not set. These have to be the lesser of either the baseline values or those modeled in 2018 since they can show no degradation from the baseline and must be no less stringent than the existing Clean Air Act requirements.
12. Reasonable progress goals – dirty days: The baseline values used for the calculations in Tables 3 and 4 of the SIP are based on those of Table 4.5-1 from the EC/R report. When this table was transferred to the Appendix of the SIP the footnotes were deleted. These footnotes indicate that the baseline values used here are not those in Section 5 of the SIP, but rather those that reflect adjustments proposed by MRPO. Changing the baseline values also changes the 2018 goals. In section 5 of the SIP, it appears that Michigan proposes using the standard baseline values. If the standard baseline values are used and the 2018 goal is recalculated (18.78 and 21.48 for Isle Royale and Seney, respectively) the modeled deciview deficits in 2018 increase to 1.26 for Isle Royale and decrease to 0.90 for Seney. For clarity please show the baseline values and the modeled values you are using to set your reasonable progress goals versus incremental values.
13. “Nonhealth-based” terminology: In its plan Michigan terms the regional haze regulations as “nonhealth-based.” We are unsure of the regulatory relevance of this term and are also unclear why Michigan believes it can de-emphasize one part of the Clean Air Act because it believes the part is “nonhealth-based.” In fact the material in the EC/R report supports the opposite conclusion. Page 102 of the report states “It must also be noted that the health benefits of reducing SO₂ and NO_x emissions are generally expected to outweigh the costs of control (as discussed in Section 6.3). These health benefits stem from the reduced ambient levels of PM and ozone which would result from the control of SO₂ and NO_x.” Also on page 35 “When benefits in the entire modeling domain were considered, the estimated values of these benefits outweighed the projected costs of control by more than a factor of 10 for both the EGU1 and EGU2 strategies.”
14. Regional Haze and its relationship to ozone/PM_{2.5}: Michigan assumes that any controls it makes later for ozone and/or PM_{2.5} would also benefit regional haze. Until your plan for ozone and/or PM_{2.5} is known, this assumption can not be demonstrated. The Class I areas and the PM_{2.5} non-attainment areas are at opposite ends of the state from each other. A major issue affecting this question would be whether regional or local control strategies were adopted. With the lack of information available at this time we can not conclude that controls adopted for ozone and/or PM_{2.5} in the future would also benefit regional haze in the northern Class I areas.

On the other hand, if we were to accept the assumption that addressing ozone/PM_{2.5} non-attainment areas in the future in Michigan will also help haze in the northern Class I areas; then the opposite is also true, namely that addressing haze now will also address the non-

attainment areas. With that conclusion, addressing haze according to the Clean Air Act would also make progress on eliminating non-attainment areas for PM_{2.5} and ozone.

15. Consultation: Section 10.1 outlines what Michigan has done so far in regards to consultation, but it does not address what will be done in the future under the long term strategy. For example, will the Northern Class I areas calls continue? If so with what frequency? If these calls will not continue, who will consult with whom, when, how, and what procedures will be followed? Since the majority of actions relied on in the future by Michigan to reduce haze will be for PM_{2.5} and ozone, how will the FLMs be consulted during that process?
16. Basis for emission reduction obligations: Michigan chooses their reasonable progress goals based on Table 4.5-1 in the EC/R report. It is unclear which MRPO modeling run this table is based on and likewise what emission inventory was associated with that run.
17. Periodic Reports: Michigan states that all requirements under 40 CFR 51.308(g) shall be addressed. We don't feel there is enough information presented for us to determine what Michigan will do under this section. For example under 40 CFR 51.308(g)(6) how will the state determine whether the plan elements and strategies are sufficient to meet the established reasonable progress goals? What data will be looked at? What actions will the state take to reduce emissions should they be required based on the data?
18. Determination of adequacy of the plan: We are unclear how Michigan will make the determinations listed in its "list of possible actions" on page 25. What data will be looked at and what decision thresholds will be used? How will Michigan determine if any inadequacy is due to emissions from Michigan or other states/areas?
19. Verification, contingencies, and new sources: We would like Michigan to consider contingency measures or procedures which could be triggered if the unexpected or unforeseen occurs, e.g. projected future emissions reductions do not materialize or are distributed differently over an alternate geographic area. Emission inventories could also be found to be incorrect or flawed. Are there adaptive management strategies or increased review strategies which could be implemented in those situations?

Also, we feel Michigan should provide some language in their SIP making the link between the Regional Haze and New Source Review programs and continued FLM coordination through these measures. Currently there is no mechanism in the SIP to ensure that the emissions from new stationary sources and major modifications will be consistent with making reasonable progress toward the national visibility goal (40 CFR 51.307). This could be especially important for new sources that were not anticipated in the growth strategies used to generate the 2018 emission inventories.

20. Wildland Fire: We agree with the statement in the MRPO *Summary of Technical Information*, that wildland fire emissions are not a significant contributor to visibility impairment at the Northern Class I areas (page 12) and further emission reduction techniques from prescribed fires are not needed before 2018. Based upon this finding, it appears the current prescribed fire smoke management techniques implemented in Michigan are adequate

to protect visibility in the Class I areas. In addition, the pending adoption of a smoke management plan (SMP) for Michigan should provide additional management potential. If you concur, we suggest your agency note this finding in the final SIP rather than the current language proposed in the SIP with regard to the SMP.

We also have a concern that any certification, reference or citation of the SMP in the SIP can create an administrative barrier to modification of the draft SMP. As the program is yet to be implemented and is still under development, it seems premature to list elements of the SMP - such as the text on page 22. In addition, one can envision a new program will have significant need for changes upon implementation. It will be important to maintain maximum flexibility to modify the SMP on an as needed basis without having to go through a formal SIP revision, EPA administrative process, or waiting for long periods of evaluation such as prescribed by the Regional Haze review cycle.

Lastly, the current draft of the SMP does not incorporate key concepts from the recent Exceptional Event Rule (EER). These concepts differ from the EPA 1998 Interim Air Quality Policy on Wildland and Prescribed Fires which was the basis of the current draft SMP. We believe that the SMP should be revised so that concepts from the EER can be incorporated which will likely change terms and approaches that were cited about the SMP in your long term strategy section of the SIP. We will be providing more detailed comments on the SMP directly to the Michigan DNR at a later date.

In summary we feel that Michigan's regional haze plan is deficient in that it is missing critical pieces, as outlined above. In addition, we have not had an opportunity to review critical supporting analyses. Lastly, we are disappointed that in its plan Michigan shows it has the tools available to reduce emissions to the level needed to achieve the uniform rate of progress in the northern Class I areas but decides that the costs are too high in spite of the fact that the costs of controls are at or below the levels deemed cost-effective by EPA in other rulemakings.

Note that we have comments that we feel warrant additional consultation prior to public release. We look forward to your response as required by 40 CFR 51.308(i)(3). For further information, please contact Trent Wickman at (218) 626-4372 or Ann Mebane at (307) 578-8241.

We look forward to continuing to work with Michigan to improve visibility in the future. Specifically we look forward to the submittal of the BART determinations and the revision of the reasonable press goals to ensure that they reflect the improvement expected to result from the implementation of the Clean Air Act in Michigan and neighboring states. Thank you for considering our comments.

Sincerely,

/s/ James W. Sanders
JAMES W. SANDERS
Forest Supervisor

cc: Leanne M Marten
Thomas A Schmidt
Susan J Spear
Charles E Sams
Ann E Mebane
John Summerhays
Steve Cross